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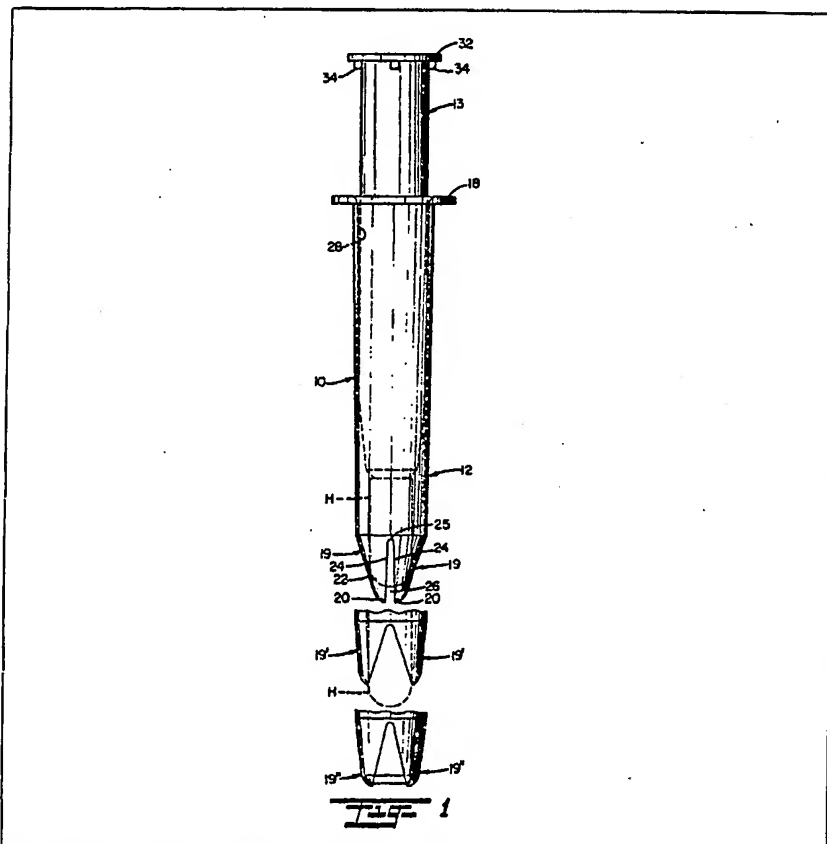
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(54) Hygienic applicator

(57) A hygienic applicator, for example for the insertion of suppositories or tampons, has a thin-walled tubular shell (12) with a dome-shaped forward end formed by resilient tapered fingers (19) with clearances spaces (26) therebetween and a plunger (13) movable telescopically within the shell and having a closed leading end conforming substantially to the contour of the dome-shaped end of the shell.



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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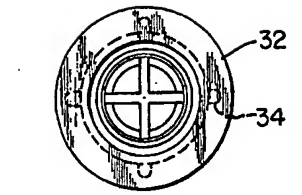


FIG 6

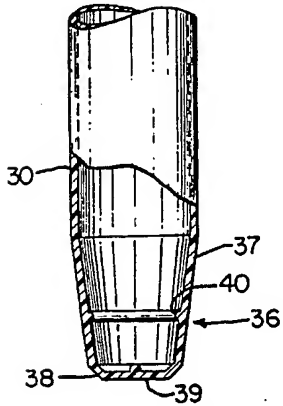
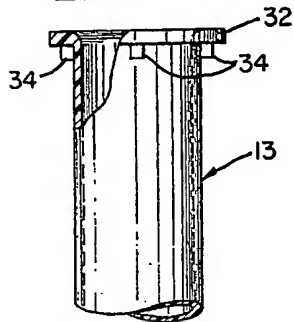


FIG 5

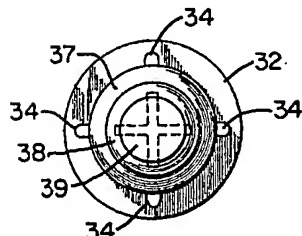


FIG 7

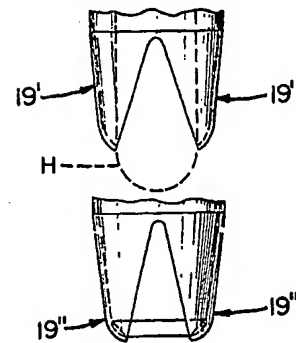
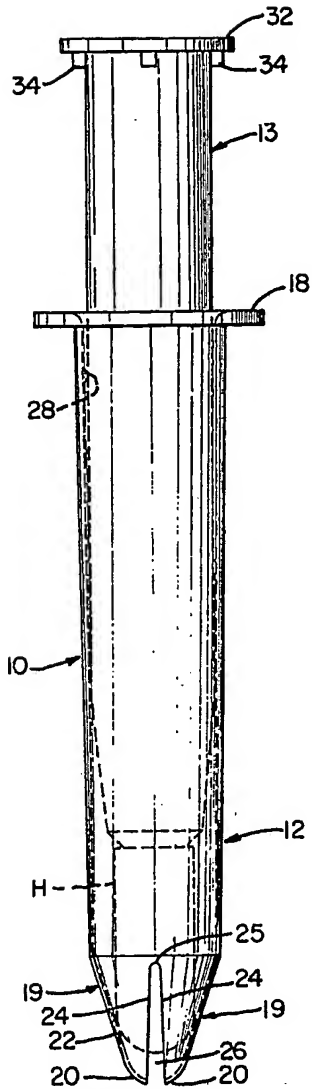


FIG 1

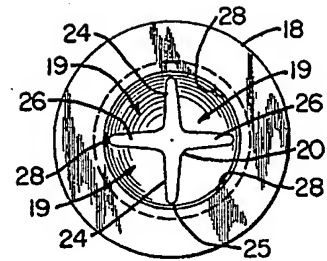


FIG 3

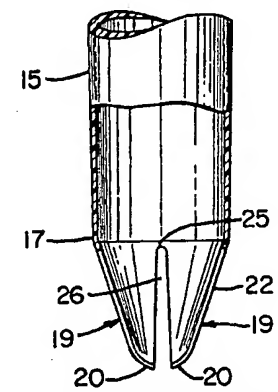
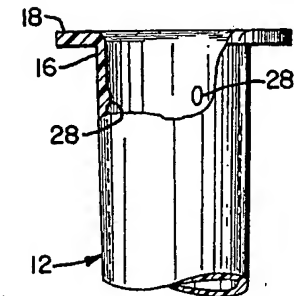


FIG 2

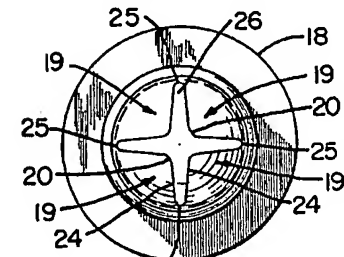
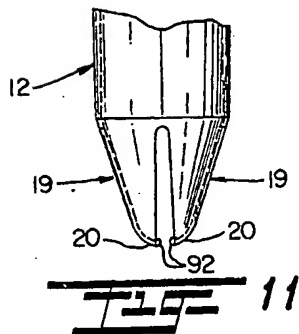
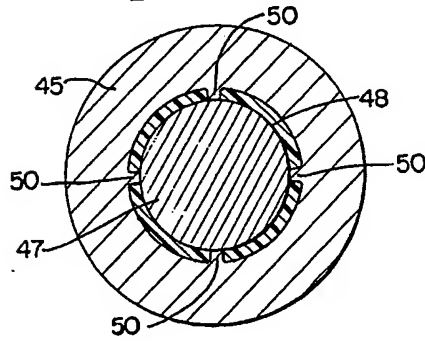
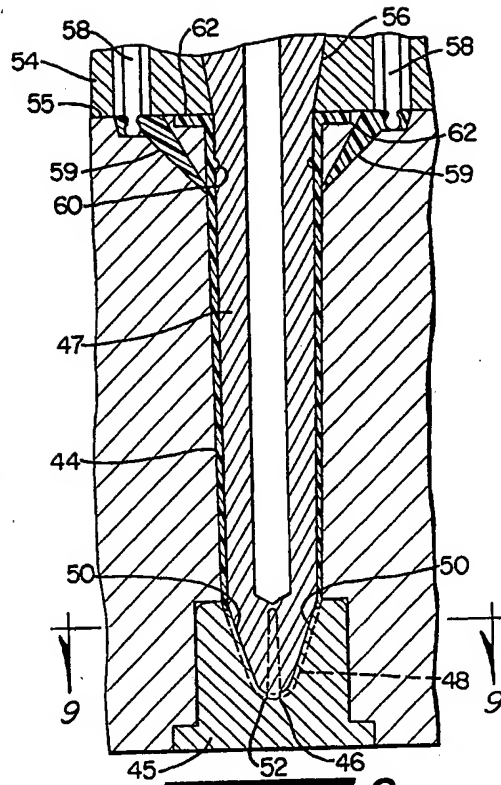
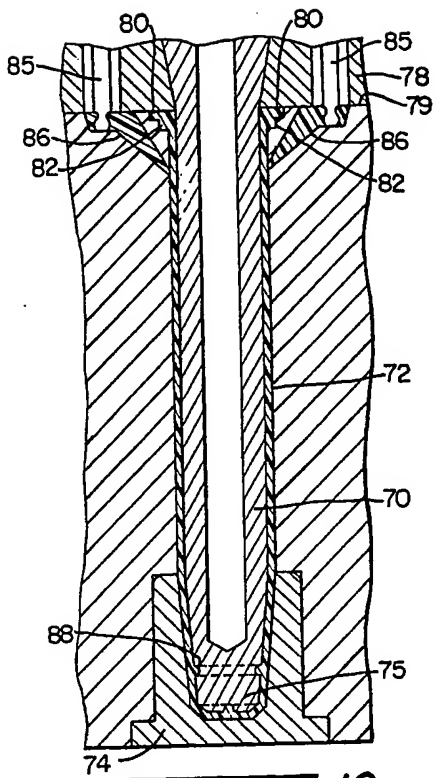


FIG 4

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SPECIFICATION

Hygienic applicator

5 This invention generally relates to hygienic appliances and more particularly relates to applicators for the retention and selective ejection of suppositories, tampons, and the like.

In accordance with the present invention,
10 there is provided a hygienic applicator assembly comprising a thin-walled shell of generally tubular configuration having an outer wall along its greater length adapted to contain a hygienic medium therein and a generally
15 dome-shaped end at one end of said shell defined by a series of resilient fingers converging forwardly from the one end of said outer wall, each of said fingers having inclined side edges converging forwardly toward
20 one another in a generally circumferential direction to terminate in a common, rounded terminal end, and a clearance space formed between the inclined side edges of adjacent said fingers, and male inserter means of a
25 length corresponding substantially to that of said thin-walled shell, said male inserter means being movable in close-fitting telescoping relation through the one end of said thin-walled shell, said male inserter means having
30 a closed, forwardly convergent leading end conforming substantially to the contour of said dome-shaped end of said thin-walled shell.

The present invention also provides the method of forming a hygienic applicator comprising the steps of molding a tubular member
35 to define an outer, thin-walled tubular section of uniform wall thickness tapering forwardly throughout its substantial length and terminating in a series of correspondingly formed,
40 generally triangular segments which converge forwardly toward one another, said segments being uniformly disposed about the periphery of said forward end of said tubular section and terminating in rounded, terminal ends
45 disposed in closely-spaced relation to one another, and molding a second tubular member to define an external wall of uniform diameter corresponding to the inner diameter of the forward end of said first tubular member and terminating in a forwardly convergent, leading end corresponding to the contour of the segmental end of said first tubular member.

The invention will now be particularly described, by way of example only, with reference to the accompanying drawings in which:

60 *Figure 1* is a front view in elevation of the preferred embodiment of the present invention;

Figure 2 is a front view partially in section illustrating the outer applicator tube of the preferred form of the present invention as shown in Fig. 1;

65 *Figure 3* is an end view of the outer applicator tube taken from the trailing end of the tube;

Figure 4 is an opposite end view of the applicator tube taken from the leading end as shown in Fig. 2;

Figure 5 is an elevational view partially in section of the preferred form of plunger as shown in Fig. 1;

Figure 6 is an end view of the trailing end of the plunger shown in Fig. 5;

Figure 7 is an end view of the leading end of the plunger shown in Fig. 5;

Figure 8 is a somewhat fragmentary cross-sectional view of the die components employed in the fabrication of the preferred form of applicator tube;

Figure 9 is an enlarged cross-sectional view taken about lines 9-9 of Fig. 8;

Figure 10 is a somewhat fragmentary cross-sectional view of the die components employed in the fabrication of the preferred form of plunger shown in Figs. 5 to 7; and

Figure 11 is a fragmentary view partially in section of a modified form of applicator tube in accordance with the present invention.

Referring in more detail to the drawings, there is illustrated in Figs. 1 to 7 a preferred form of applicator assembly 10 which is broadly comprised of a first tubular member
95 or applicator tube 12 and a second tubular member in the form of a male inserter or plunger 13 which is insertable in telescoping relation to the applicator tube for the purpose of ejecting a hygienic medium as generally designated at H. For the purpose of describing the preferred form of the present invention and as a setting therefor, the hygienic medium H may be a suppository which is of a consistency such that it is normally solid at
105 room temperatures and will rapidly melt into a gel or liquid-like consistency at body temperature. The suppository is usually bullet-shaped or of elongated generally cylindrical configuration as shown and is adapted to be inserted
110 by placing the leading end of the applicator tube within the rectum and advancing the plunger 13 forwardly through the tube 12 to completely eject the hygienic medium H therefrom.

115 In accordance with the present embodiment the applicator tube 12 is generally in the form of a thin-walled shell having an outer wall 15 which is of progressively reduced diameter from its trailing end 16 to its leading end 17 with a gripper ring 18 positioned at its trailing end and a series of generally triangular segments 19 converging forwardly from the leading end 17 of the wall 15 to terminate in a forward rounded extremity or tip 20. In the
125 preferred form, there are four quadrantal end segments 19 of corresponding size and configuration which converge forwardly in equally spaced circumferential relation to one another from the leading end 17. Each segment 19 inclines forwardly first at an acute angle to the
130

longitudinal axis of the tube along the greater length of the segment as generally designated at 22, then curves more abruptly at its leading end 20 so as to extend substantially transversely to the longitudinal axis of the tube at its extremity.

As viewed in Fig. 4, when taken from the leading end of the applicator tube, each quadrantal end segment 19 has forwardly inclining side edges 24 which are somewhat rounded in contour and converge forwardly from the base 25 to terminate in a common rounded end which forms the leading end or extremity 20. By virtue of there being four quadrantal end segments which are arranged in closely-spaced relation to one another and further by virtue of the length-to-width ratio of the segments, the included angle formed between the inclined side edges 24 of each segment is equal to or greater than 90° so as to result in the formation of a gently sloping rounded extremity or tip 20. In other words, the tip 20 is rounded both in a radial direction inwardly toward the longitudinal axis of the tube and in a circumferential direction in forming a juncture between the inclined edges 24. Preferably, the side edges 24 converge in a direction such that a clearance space or gap 26 formed between side edges 24 of adjacent segments 19 is of a uniform or of a progressively increased width toward the leading end or tip 20. In a manner to be hereinafter described, the segments 19 are composed of a resilient or pliable material and are so formed as to be normally disposed in the substantially closed position as illustrated in Figs. 1 to 4; and any pressure applied to the tip or leading end 20 will cause the segments to be drawn more closely together. However, once the pressure is removed from the segments, they will tend to spring back into the partially closed position as illustrated in Figs. 1 to 4. Conversely, if an opening pressure is applied internally of the segments, such as, by the advancement of the plunger 13, to cause the hygienic medium H to be advanced against the inner walls of the segments 19, the segments will readily spread outwardly in a radial direction, as shown in dotted form at 19' in Fig. 1. Again, once the hygienic medium is fully or completely ejected from the leading end of the applicator tube, the segments will return to their normal, partially closed position as illustrated in full at 19".

The gripper ring 18 which is formed at the trailing end of applicator tube 12 is in the form of an integral flange which projects outwardly in a radial direction from the trailing extremity of the tube 12 and takes the form of a thin, extremely wide plate which will facilitate grasping and handling of the tube in a manner to be hereinafter described. Further, a plurality of radially inwardly projecting dimples or lobes 28 are arranged in equally spaced circumferential relation around the in-

ner wall surface of the wall 15 adjacent to its trailing end, the dimples being of generally convex or spherical configuration so as to smoothly guide the suppository or hygienic medium H as well as the plunger 13 for longitudinal advancement through the applicator tube 12.

The preferred plunger 13 takes the form of a generally tubular or hollow cylindrical wall 30 which is of uniform diameter throughout and has an outer diameter corresponding to the inner diameter at the leading end of the wall 15 of the applicator tube. Further, the locator means 28 on the inner wall surface of the tube 12 are dimensioned so as to define an inner effective diameter at the trailing end of the tube 12 corresponding to the outer diameter of the wall 30. The plunger wall 30 is in the form of a thin-walled shell which is provided with a radially outwardly directed, unitary flange 32 at its trailing end provided with a series of uniformly spaced limit pins 34 arranged around the surface of the flange 32 so as to project in a forward direction externally of the wall 30. The plunger 13 includes a forwardly convergent or snub-nosed leading end 36 which is dimensioned to conform to the configuration of the inner wall surfaces of the segments 19 when in the closed position, as best seen from Fig. 1, and to this end is provided with a forwardly convergent sidewall 37 which inclines at an acute angle to the longitudinal axis of the plunger and merges into a more sharply inclined sidewall section 38 which terminates in a squared end surface 39. The sidewall 37 is provided with a rib 40 on its inner wall surface, but most importantly, the sidewall 37 is inclined to correspond to the angle of inclination of the sidewall 22 of each of the segments 19 while the sidewall 38 inclines at an angle more nearly corresponding to the more abrupt curvature of the leading extremities or tips 20 of the segments 19. By virtue of the construction and arrangement of the plunger 13 as described, the plunger is insertable through the trailing end of the tube 12 and is guided in its forward advancement by the locating means 28 to engage or abut the trailing end of the suppository H. Assuming that the suppository is of a diameter corresponding to the leading end of the wall 15, it will, as it is advanced by the plunger, force the segments 19 to spread or expand in an outward radial direction, for example, as represented at 19' in Fig. 1. The plunger as it approaches the leading end of the tube 12 will advance in close-fitting relation along the inner wall surface of the tube so as to insure complete removal and ejection of the suppository through the leading end of the tube until the plunger reaches a point such that its leading end occupies the space within the segmental end of the tube and specifically with the squared end surface 39 disposed opposite to

the tips 20. In this relation, the plunger is dimensioned to be of a length corresponding to the length of the tube and is limited in its forward projection through the tube by abutment of the limit stops 34 against the trailing end surface of the gripper ring 18 on the tube. Once the hygienic medium H has been completely expelled from the leading end of the tube, the segments will be free to return to the position as represented at 19" in Fig. 1 in closely surrounding relation to the leading end of the plunger.

A description of the forming operation of the assembly of the present invention will serve to highlight a number of features which are incorporated into the applicator assembly and which make it adaptable for use in applications not practical with the presently available applicators. Preferably, the method is carried out in an injection molding operation where, as illustrated in Figs. 8 and 9, the outer applicator tube 12 is formed into the desired configuration by an outer generally cylindrical cavity 44 having a counterbored portion at its forward end for insertion of a nose block 45 which is provided with a generally dome-shaped cavity 46 aligned with the wall surface of the cavity 44. A hollow central core 47 is spaced concentrically within the cavity 44 and nose block 45 with a forward conical end 48 of the core being centered within the nose block by equally spaced, inwardly projecting ribs 50 on the inner wall of the nose block 45, as best seen from Fig. 9. The spaced inwardly projecting ribs 50 are arranged at equally spaced circumferential intervals and, in the formation of the series of four segments 19 as described with reference to the preferred form, four ribs are spaced at 90° intervals around the inner wall surface of the nose block cavity 46. These ribs converge into a common central area or space as represented at 52 and which defines the clearance space between the tips 20 of the segments. A rearward support block 54 abuts rearward end surface 55 of the cavity section 44 and surrounds rearward flared end 56 of the central core 47. Injection ports 58 extend through the support block into communication with tunnel gates 59 in outer surrounding relation to the rearward end of the cavity section, the tunnel gates being angularly directed from the injection ports to converge forwardly into communication with the space formed between the central core 47 and outer cavity section 44. Slight indentations 60 are formed at equally spaced circumferential intervals around the external wall surface of the central core 47 adjacent to the rearward end surface 55 of the cavity to form the locators 28; also a radial space 62 is formed between the rearward end of the cavity section 44 in surrounding relation to the core and which is designed to form the radially outwardly projecting gripper ring 32 on the applicator tube

12.

In forming the applicator tube 12, preferably a low density polyethylene material is employed which has the characteristic of curing into a relatively soft, pliable wall section, for example, when formed to be on the order of 0.005" in wall thickness. The pliability or resiliency of the material is most pronounced in the segmental ends 19. The material is injected through the injection ports 58 under pressure so as to flow through the tunnel gates and evenly throughout the space formed between the outer cavity section 44 and central core 47 so as to completely and uniformly fill the spaces as defined. In accordance with well-known practice, gases are vented through openings, not shown, in the nose block 45, which gases tend to form and collect as the molded plastic material is injected in the cavity.

In a similar manner, the inner plunger 13 is formed by an injection molding process in which a central core 70 is positioned within an outer cavity section 72, the latter provided with a forward nose block 74 having a generally frustoconical cavity 75 which aligns with the inner wall of the cavity section 72. The leading end of the core 70 and the cavity 75 within the nose block 74 are formed with correspondingly angled surfaces which result in the formation of the end surfaces 37 and 38; and the leading end of the core as well as the closed end of the cavity area 75 are correspondingly squared to result in the formation of the squared end surface 39. Again, the core is supported in position by a rearward support block 78 which abuts the rearward end surface 79 of the cavity section 70, and a radial space 80 is formed in the cavity wall along the rearward end surface 79 of the cavity wall for the purpose of forming the radially directed end surface 32 at the rearward end of the plunger. Bores 82 are formed at spaced intervals in the cavity wall in communication with the space 80 for the purpose of forming the limit stop elements 34 around the end surface 32.

As in the case of the molding of the applicator tube, injection ports 85 extend through the support block 78 into communication with tunnel gates 86 for the injection of plastic material into the mold. A circular groove 88 is formed at the external surface of the core 70 adjacent to its leading end for the purpose of forming the internal rib 40 on the inner wall of the plunger. Suitable bores, not shown, are provided in the nose block 74 for expulsion of gases which collect in the mold during the formation of the plunger 13. In this relation, most desirably a high density polyethylene material is employed so as to result in the formation of a harder, substantially rigid plunger element, as opposed to the relatively soft pliable applicator tube. Again the material is injected under pressure through the tunnel

gates to uniformly fill the space between the core and cavity and to form a plunger having a uniform wall thickness with a uniform diameter throughout its length, except at the

5 leading end or nose of the plunger as previously described. This wall thickness will generally correspond to that of the applicator tube and be on the order of 0.005" thick. While the wall thickness of the applicator tube 10 12 is uniform throughout its length, preferably, the diameter of the tube will progressively decrease at a low gradual angle, then merge into the segmental end, the segments extending at a relatively low gradual angle from the 15 the segments with respect to the longitudinal axis is less than 20° and, which coupled with the cross-sectional curvature of the segments, will assure that the segment ends do not 20 collapse when the applicator tube is inserted into a body cavity. At the same time, the soft pliable composition of the segments will permit them to readily expand under the opening pressure of the suppository. Once the plunger 25 13 has entered the segmental end and reached the tips of the segments so as to insure complete ejection of the suppository, the segments 19 will be free to return to their normal, partially closed position as illustrated 30 in Fig. 1. In this position, a slight spacing between the fingers will minimize any tendency of the fingers to pinch the skin or body tissue as the applicator is withdrawn from the cavity. The plunger cooperates in this respect 35 in preventing contraction of the segments into abutting relation.

The slight rounded contour given to the inclined side edges 24 of the segments can be accomplished to some extent by the specific configuration of the ribs 50. This can be 40 further aided by any suitable machining operation following the formation of the applicator tube. In the modified form of Fig. 11, slight enlargements or beads 92 may be formed at 45 the tip ends of the segments 19. Preferably, the beads or enlargements 92 would be formed as a separate step following completion of the applicator tube; otherwise, to form the beads as part of the ejection molding 50 process would tend to result in some irregularity in the formation of the segments owing to the uneven or increased wall thickness at the tips and uneven curing of the material. For instance, the beads or protective edges 92 55 may be formed by bonding a droplet of plastic to each of the tips 20 of the applicator tube after the injection-molding operation.

It is therefore to be understood that while a preferred and modified forms of hygienic applicator assembly and method of making same 60 have been described, together with possible alternatives to the construction and design of the applicator assembly, various other modifications, variations and equivalent arrangements for such assembly and method may be 65

resorted to which fall within the scope of the present invention as defined by the appended claims.

70 CLAIMS

1. A hygienic applicator assembly comprising a thin-walled shell of generally tubular configuration having an outer wall along its greater length adapted to contain a hygienic 75 medium therein and a generally dome-shaped end at one end of said shell defined by a series of resilient fingers converging forwardly from the one end of said outer wall, each of said fingers having inclined side edges converging forwardly toward one another in a 80 generally circumferential direction to terminate in a common, rounded terminal end, and a clearance space formed between the inclined side edges of adjacent said fingers, and male 85 inserter means of a length corresponding substantially to that of said thin-walled shell, said male inserter means being movable in close-fitting telescoping relation through the one end of said thin-walled shell, said male inserter means having a closed, forwardly convergent leading end conforming substantially to the contour of said dome-shaped end of said thin-walled shell.

2. A hygienic applicator assembly according to claim 1, wherein each of said fingers is 95 a self-supporting and comprised of a resilient material such that upon ejection of a solid hygienic medium contained in said thin-walled shell by said male inserter means, said fingers 100 are operative to expand in an outward radial direction under the opening pressure of the hygienic medium.

3. A hygienic applicator assembly according to claim 2, wherein said series of fingers 105 consists of four triangular fingers arranged uniformly in circumferentially spaced relation about the one end of said outer shell, the bases of said triangular fingers being located at the one end of said outer wall of said thin-walled shell. 110

4. A hygienic applicator assembly according to any preceding claim wherein a plurality of inwardly directed projections are formed in circumferentially spaced relation about the inner surface of said outer wall adjacent to the rearward open end of said outer wall. 115

5. A hygienic applicator assembly according to any preceding claim wherein the rearward open end of said outer wall has a 120 radially outwardly directed, unitary gripping ring extending therefrom.

6. A hygienic applicator assembly according to any preceding claim wherein each of said fingers has a base in the form of a 125 quadrant of a circle whose diameter corresponds to that of said outer thin-walled shell, the base of each finger being greater than the height of each said triangular finger.

7. A hygienic applicator assembly according to claim 6, wherein each of said fingers is 130

provided with a bead at its forward, common terminal end.

8. A hygienic applicator assembly comprising an outer, generally thin-walled shell of tubular configuration having a forwardly tapering outer wall adapted to contain a solid hygienic medium therein and provided with a gripping ring at one end and an opposite segmental end defined by a series of segments converging forwardly from said outer wall, each of said segments being of generally triangular configuration having inclined, equilateral side edges converging forwardly toward one another to terminate in a common, rounded terminal end with a forwardly divergent, open slotted area being formed between the side edges of adjacent segments, and a plunger of a length corresponding substantially to that of said outer wall of said shell, said plunger being movable in telescoping relation through said open end of said outer wall and having a forwardly convergent leading end conforming substantially to the contour of said segmental end of said outer shell.

9. A hygienic applicator assembly according to claim 8, including locator means in the form of radially inwardly directed dimples on the inner surface of said outer wall adjacent to the rearward end of said outer wall whereby to guide said plunger in close-fitting relation through the rearward open end of said outer wall, and limit means on said plunger to limit the forward projection of said plunger through said shell.

10. A hygienic applicator assembly according to claim 8 or claim 9, said plunger being of uniform diameter throughout its length, and said outer wall being tapered in a forward direction from a diameter slightly greater than that of said plunger to a diameter corresponding to that of said plunger at the forward end of said outer wall.

11. A hygienic applicator assembly according to any of claims 8 to 10, said plunger being of generally tubular configuration having a rearward open end and a radially outwardly extending flange at said rearward open end provided with forwardly directed projections defining said limit means.

12. A hygienic applicator assembly according to any of claims 8 to 11, said forwardly convergent leading end of said plunger being of generally frusto-conical configuration and terminating in a squared end surface.

13. A hygienic applicator comprising an exterior, thin-walled shell having an outer wall extending over the major part of its length for receiving a solid hygienic medium therein, said shell being provided with a rearward open end at one end of said outer wall and a plurality of corresponding, generally triangular segments converging forwardly from the opposite end of said wall, said triangular segments being composed of a resilient material

and having inclined side edges converging forwardly toward one another in a generally circumferentially direction to terminate in a rounded terminal end forming the apex of each triangular segment, the included angle between said inclined side edges of each triangular segment being greater than 90° and each of said inclined side edges being rounded in cross-section.

14. A hygienic applicator according to claim 13, wherein said outer wall of said shell tapers gradually in a forward direction throughout the major part of its length.

15. A hygienic applicator according to claim 14, wherein each said segment in its relaxed state is disposed in closely-spaced relation to each adjacent segment, each segment having an inclined, straight wall section converging forwardly from said outer wall and terminating in a radially inwardly curved extremity at its rounded terminal end.

16. A hygienic applicator according to claim 13, wherein each of said segments is self-supporting and composed of a resilient material, there being a series of four triangular segments arranged uniformly in circumferentially spaced relation about the one end of said outer wall, the bases of said triangular segments being located at the forward end of said outer wall of said thin-walled shell.

17. A hygienic applicator according to claim 16, wherein a plurality of inwardly directed projections are formed in circumferentially spaced relation about the inner surface of said outer wall adjacent to the rearward open end of said outer wall, the rearward open end of said outer wall having a radially outwardly directed, unitary finger gripping ring extending therefrom.

18. A hygienic applicator according to claim 13, wherein each of said segments has a base in the form of a quadrant of a circle whose diameter corresponds to that of said outer thin-walled shell, the base of each segment being greater than the height of each said triangular segment.

19. A hygienic applicator according to claim 18, wherein each of said triangular segments is provided with a bead at its forward, common terminal end.

20. A suppository applicator comprising an outer, generally thin-walled shell of tubular configuration having a forwardly tapering outer wall adapted to contain a generally bullet-shaped suppository therein, said shell having a split end defined by a series of resilient triangular segments converging forwardly from said outer wall in an inward radial direction and curving radially inwardly at their forward extremities, each of said segments having inclined, equilateral side edges converging forwardly toward one another to terminate in a common, rounded terminal end at each forward extremity with a forwardly divergent, open slitted area being formed be-

tween side edges of adjacent of said triangular segments; and a tubular plunger of a length corresponding substantially to that of said shell, said plunger being movable in telescoping relation through said open end of said outer wall and having a forwardly convergent leading end conforming substantially to the contour of said split end of said outer shell, said plunger having limit stop means to limit the forward projection of said leading end to a point adjacent to said forward extremities of said triangular segments.

21. A suppository applicator according to claim 20, including locator means in the form of radially inwardly directed portions on the inner surface of said outer wall adjacent to the rearward end of said outer wall whereby to guide said plunger in close-fitting relation through the rearward open end of said outer wall.

22. A suppository applicator according to claim 8, wherein said plunger is of uniform diameter throughout its length, and said outer wall of said shell is tapered in a forward direction from a diameter slightly greater than that of said plunger to a diameter corresponding to that of said plunger at the forward end of said outer wall.

23. A suppository applicator according to claim 20, wherein said plunger is of generally tubular configuration having a rearward open end, and said leading end being of generally frusto-conical configuration being defined by inclined straight wall sections terminating in a squared end wall surface.

24. The method of forming a hygienic applicator comprising the steps of molding a tubular member to define an outer, thin-walled tubular section of uniform wall thickness tapering forwardly throughout its substantial length and terminating in a series of correspondingly formed, generally triangular segments which converge forwardly toward one another, said segments being uniformly disposed about the periphery of said forward end of said tubular section and terminating in rounded, terminal ends disposed in closely-spaced relation to one another, and molding a second tubular member to define an external wall of uniform diameter corresponding to the inner diameter of the forward end of said first tubular member and terminating in a forwardly convergent, leading end corresponding to the contour of the segmental end of said first tubular member.

25. The method according to claim 24 further characterized by molding radially outwardly directed flanges at the rearward ends of each of said first and second tubular members and forming forwardly directed limit stop members on the flange of said second tubular member which limit stop members are operative to engage the flange on said first tubular member to limit the extent of projection of said second tubular member through said first

tubular member.

26. The method according to claim 24 in which said first and second tubular members are injection-molded out of thermoplastic materials of different densities whereby the first tubular member possesses a greater resiliency than the second tubular member.

27. The method according to claim 23 in which the segmental end of said first tubular member is defined by quadrantal end segments of generally triangular configuration, each segment having inclined side edges converging forwardly into a common rounded terminal end, the included angle between said inclined side edges being greater than 90°.

28. A hygienic applicator substantially as herein described with reference to the accompanying drawings.

85 CLAIMS (19th Mar 1982)

13. A hygienic applicator comprising an exterior thin-walled shell having an outer wall extending over the major part of its length for receiving a solid hygienic medium therein, said shell being provided with a rearward open end at one end of said outer wall and a plurality of corresponding, generally triangular segments converging forwardly from the opposite end of said wall, said triangular segments being composed of a resilient material and having inclined side edges converging forwardly toward one another in a generally circumferential direction to terminate in a rounded terminal end forming the apex of each triangular segment, the included angle between said inclined side edges of triangular segment being greater than 90° and each of said inclined side edges being rounded in cross-section.

17. A hygienic applicator according to claim 16, wherein a plurality of inwardly directed projections are formed in circumferentially spaced relation about the inner surface of said outer wall adjacent to the rearward open end of said outer wall, the rearward open end of said outer wall having a radially outwardly directed, unitary finger gripping ring extending therefrom.

25. The method according to claim 24 further characterized by molding radially outwardly directed flanges at the rearward ends of each of said first and second tubular members and forming forwardly directed limit stop members on the flange of said second tubular member which limit stop members are operative to engage the flange on said first tubular member to limit the extent of projection of said second tubular member through said first tubular member.